

REMARKS

Claims 1-11 are pending in the present application, of which claims 2, 3, 5, 7, 10 and 11 have been withdrawn from consideration. Reconsideration in view of the following remarks is respectfully requested.

As to the Merits:

As to the merits of this case, the Examiner sets for the following rejections:

claims 1, 4, 8 and 9 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Suehiro et al.* "Very Efficient Wireless Frequency Usage by Coherent Addition of Multipath Signals Using SCCZ Sequence Set", Graduate School of Systems and Information engineering, July 2002; and

claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Suehiro*, as applied to claim 1 above, and further in view of *Kelsuke Higuma et al.* (hereinafter *Higuma*), "Simulation of Very Efficient Wireless Frequency Usage System using Multipath Equation on Spread Time Signals", Graduate School of Systems and Information Engineering, June 2001.

Each of these rejections is respectfully traversed.

Independent Claim 1:

Independent claim 1 calls for:

producing a plurality of transmission data sequences

$S_{A,X}=(x_0A, 0...0, x_1A, 0...0, x_2A, 0...0, ..., x_{m-1}A, 0...0)$

$S_{B,Y}=(y_0B, 0...0, y_1B, 0...0, y_2B, 0...0, ..., y_{m-1}B, 0...0)$

(0 indicates a null time of a unit length where no signal is generated)

using a plurality of data sequences

$A=(a_0a_1...a_{N-1}), B=(b_0b_1...b_{N-1}), ...$ and

a plurality of coefficient sequences

$X=(x_0x_1...x_{m-1}), Y=(y_0y_1...y_{m-1}), ...$; and

transmitting said plurality of transmission data sequences $S_{A,X}, S_{B,Y}, ...$

onto the same transmission line at the same time.

Independent claim 9 includes similar features and was rejected by the Examiner based on the same grounds and arguments as claim 1.

The Examiner admits that *Suehiro* does not teach the “producing” and “transmitting” features of claim 1. However, the Examiner asserts that the “producing” and “transmitting” features are suggested by *Suehiro* and are mainly used to prevent intersymbol interference. The Examiner cites Sections 2 and 3 of *Suehiro* as providing support for the suggestion of the

“producing” feature and Sections 1-4 of *Suehiro* as providing support for the suggestion of the “transmitting” feature of claim 1.

Applicants respectfully disagree with the Examiner’s position that *Suehiro* suggests the “producing” and “transmitting” features of claim 1. Applicants note that the object of the present invention is to reduce an increase in amplitude of the signal during the modulation of transmission data through spread spectrum, and to reduce the dynamic range of an amplifier. *Suehiro* does not disclose or suggest the transmission data sequences of claim 1 having a data structure wherein a plurality of transmission data are arranged with 0 data of a predetermined length added between the plurality of the transmission data.

Sections 2 and 3 of *Suehiro*, as cited by the Examiner, include no equations which suggest the insertion of 0 data of a predetermined length as part of “producing a plurality of transmission data sequences.”

Also, Sections 1-4 of *Suehiro* do not suggest “transmitting said plurality of transmission data sequences $S_{A,X}$, $S_{B,Y}$,... onto the same transmission line at the same time.” The reference uses the word “multipath” in the portion cited by the Examiner. However, the reference term, “multipath,” is distinguishable from the claimed “transmitting feature” as “multipath” is the transmission of a single signal by two or more paths.

Therefore, *Suehiro* does not teach or suggest the “producing” and “transmitting” features and claim 1 is not obvious in view of the reference.

The Examiner stated, regarding the “producing” feature, in the Office Action that, “one skilled in the art would know that the insertion of guard bands between symbols is *notoriously well known in the art.*” In addition, the Examiner stated, regarding the “transmitting” feature, in the Office Action that, “it would have been *obvious to one of ordinary skills in the art* to incorporate this feature into the system of *Suehiro*, in the manner claimed, for the benefit of mitigating the effects of intersymbol interference.”

The Examiner has taken Official Notice of the aforementioned statements, although the rejection does not specifically say as such. Applicants traverse the “official notice” taken by Examiner and strongly request that the Examiner provide a reference to support his position.

The “insertion of guard bands” method invoked by the Examiner is not mentioned in the reference. The Examiner did not provide any other reference citation for the origin of these “guard bands” nor did the Examiner explain what the “guard bands” are or how they would be added. There is also no suggestion in the reference to modify the reference to include “guard bands.”

Therefore, even if one were to assume that the Examiner means the “guard bands” to be the 0 data of claim 1, the addition of “guard bands” to the reference would destroy the object and purpose of the reference. Specifically, the method and examples given in *Suehiro* involve signals that come from a set of periodic sequences. For example, Section 4 of the reference notes that A is a periodic sequence and A' is obtained by cutting a sequence of a certain length from the infinite length sequence (...AAAA...). Therefore, the signal A' of the reference can only be made up of the periodic sequence A, and not of any other data source (i.e., “not from a guard band”).

As such, it is submitted that the Examiner has failed to establish a prima facie case of obviousness with regard to the features set forth in independent claims 1 and 9.

In view of the above remarks, Applicants submit that the claims are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

Application No.: 10/525,814

Response
Attorney Docket No.: 052152

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

A handwritten signature in black ink, appearing to be 'TEB', written over a horizontal line.

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